(No Model.)

J. B. DOMLEO & G. W. WOODWORTH.

HORSE DETACHER.

No. 566,972. Patented Sept. 1, 1896.

Fig. 1.

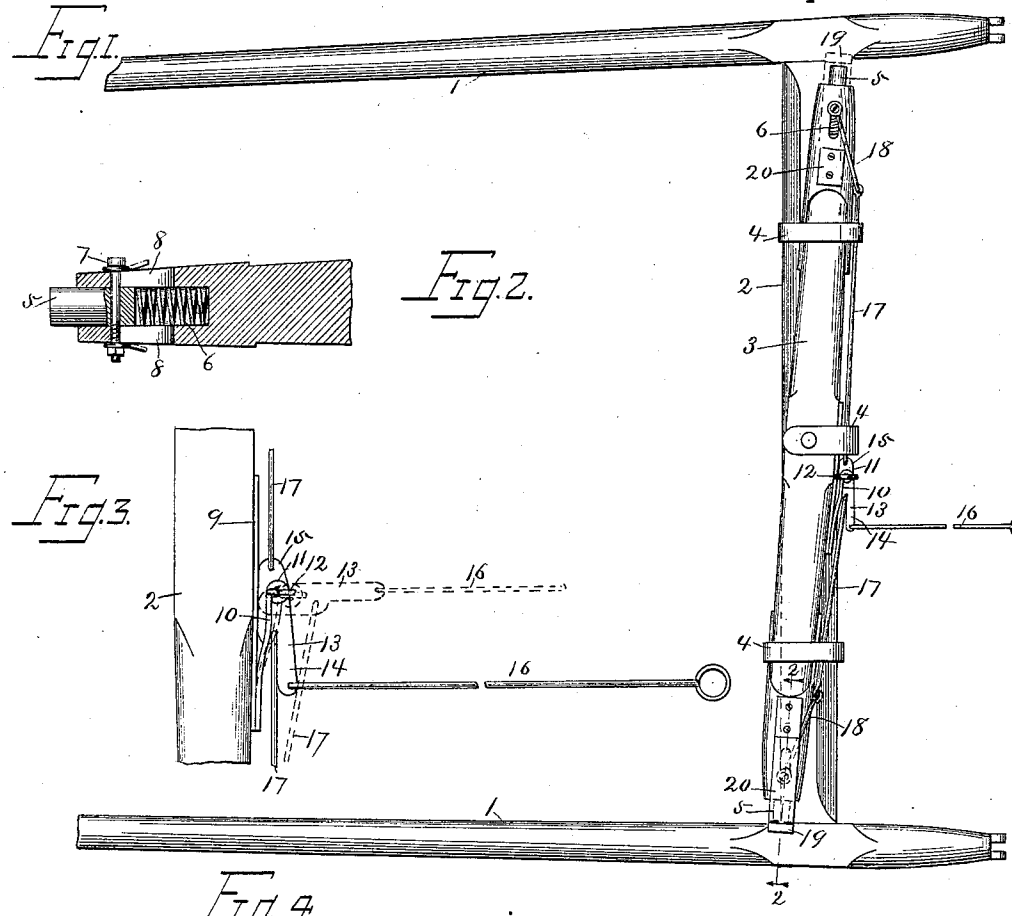


Fig. 2.

Fig. 3.

Fig. 4.

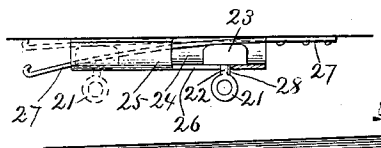


Fig. 5.

Fig. 6.

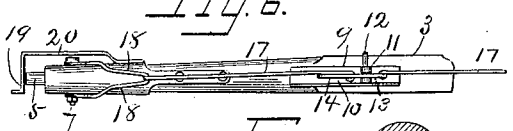


Fig. 7.

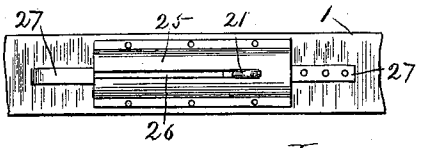
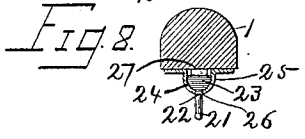


Fig. 8.



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UNITED STATES PATENT OFFICE.

JOHN BRAMLEY DOMLEO AND GEORGE WHITAKER WOODWORTH, OF MONMOUTH, ILLINOIS.

HORSE-DETACHER.

SPECIFICATION forming part of Letters Patent No. 566,972, dated September 1, 1896.

Application filed March 3, 1896. Serial No. 581,720. (No model.)

To all whom it may concern:

Be it known that we, JOHN BRAMLEY DOMLEO and GEORGE WHITAKER WOODWORTH, citizens of the United States, residing at Monmouth, in the county of Warren and State of Illinois, have invented certain new and useful Improvements in Horse-Detachers, of which the following is a specification.

The object of our invention is to provide improved means for quickly detaching draft-animals from vehicles when they start to run away by the use of a self-detaching holdback, and means by which a person in the vehicle can release the traces from their connections with the singletree.

Our invention consists in constructions and combinations hereinafter described and made the subject-matter of the claim hereto appended.

Mechanism embodying the preferred construction, arrangement, disposition, and combination of the different parts and the adjacent parts of an ordinary pair of vehicle-thills and singletree with which our improvements are incorporated are illustrated in the accompanying drawings, in which—

Figure 1 is a top plan of ordinary thills, singletree, and the detaching device applied to the singletree, the thills shown with their forward ends broken away; Fig. 2, an enlarged sectional elevation of the end of the singletree in the line 2 2 in Fig. 1, the sliding bolt shown partly in elevation and partly in section; Fig. 3, an enlarged top plan of the mid-length part of the singletree and of adjacents parts of the detaching device; Fig. 4, an enlarged side elevation, partly in section, of the self-detaching holdback; Fig. 5, a side elevation of the thills of the singletree and adjacent parts and of the holdback; Fig. 6, a rear elevation of the left-hand end of the singletree and the detaching devices adjacent thereto without the pull-rod; Fig. 7, an enlarged plan, seen from below, of the holdback and the adjacent fragmental part of the thill to which it is attached; Fig. 8, an enlarged sectional elevation in the line 8 8 in Fig. 5.

The reference-numerals herein used indicate, respectively, the same part in the different figures of the drawings.

The thills 1, cross-bar 2, singletree 3, pivoted to the cross-bar, and straps 4 are of ordinary construction and hence do not require further description herein.

The bolts 5, one of which is slidably mounted in each end of the singletree, are each forced outwardly by means of a spring 6, seated in rear of its inner end, as shown best at Fig. 2. A small bolt 7 passes transversely through each bolt 5 and through slots 8 in the singletree. The outer ends of each bolt 7 project beyond the singletree. The bolts 5 are operated as follows: A wear-plate 9 is fixed to the rear side of the singletree and near the mid-length part thereof. One end of a spring-plate 10 is fixed to the plate 9, and its other end has an eye 11 for the reception of a bolt 12. The eye 11, Fig. 6, is slotted for the reception of a lever 13, which is pivoted therein by the bolt 12, on which bolt the lever 13 turns or swings as a center of motion. One end, 14, of the lever 13 is longer than its other end, 15, and to this longer end of said lever one end of the pull-rod 16 is fixed, the other end of said pull-rod extending to within reach of the driver seated in the vehicle. Equidistant from the pivot-bolt 12 the adjacent ends of rods 17 are pivotally connected with the lever 13, one to each end of said lever. The other ends of the rods 17 are bifurcated or have each two branches 18, Fig. 6, one of which is pivotally connected with the upper end of a bolt 7 and the other with the lower end of said bolt. The shorter end 15 of the lever 13 is rounded at the outer end thereof and turns or slides on the wear-plate 9 when said lever is operated.

The eyes in the rear ends of the traces (not shown) can be engaged, one with each of the bolts 5, by first lifting the guards 19 out of the way. The arms 20, which carry the guards 19, are spring-plates and yield for that purpose. The spring-plate 10 holds the lever 13 in its normal position, with its flat side resting against the rear side of the plate 9, as best shown at Fig. 3 by full lines, and while in such position the points of attachment of the rods 17 to the lever 13 are so nearly in line with the pivot-bolt 12 and the outer ends of the rods 17 that a lock is formed which prevents any accidental movement of the bolts 5 inwardly, tending to release the

traces, unless the lever 13 is first pulled into the position shown. Should the draft-animal start to run away, or should it from any other cause become desirable to quickly release the animal from the vehicle, the driver by pulling on the rod 16, and thereby drawing the lever 13 into the position stated, will retract the bolts 5 and thus release the traces and free said animal from its attachment to the singletree.

The holdback-strap of the harness (not shown) is engaged with an eye 21, carried on a short standard 22, Fig. 4, that projects from a block 23. The block 23 is slidably seated in a semitubular aperture 24, which is formed by a plate 25, that is fixed to the under side of the thill 1, Fig. 8. The plate 25 has a slot 26 extending from the forward end thereof nearly to its rear end, Fig. 7, and the standard 22 is slidably seated in said slot. A spring 27, Fig. 4, is fixed at one end to the thill in rear of the plate 25 and extends forward to a point forward of the forward end of said plate. The block 23 does not vertically fill the space between the thill 1 and the plate 25. The spring 27 being curved, as shown at said figure, will hold the block 23 against the plate 25, Fig. 4, and thus prevent rattling in use, and when not in use and the forward ends of the thills fall to the ground then the springs 27 will prevent the blocks escaping from the semitube 24. When in use, the standard 22 is in contact with the rear end 28 of the slot 26, Fig. 4, so that the holdback is effective. When the traces are disconnected from the bolts 5, as hereinbefore described, and the draft-animal moves forward, the block 23 will be carried forward and out of the semitube 24, as indicated by dot lines at same figure, and thus entirely free said animal from the vehicle.

Having thus described our invention, what we claim as new is—

In a horse-detacher, the combination with the thills and singletree, of spring-actuated bolts 5, guards 19, a spring-plate fixed at one end to the singletree and provided with a slot and an eye in its free end, a lever 13 mounted in the slot in said spring and pivotally connected with the eye in the free end of said spring, rods 17, connected at their inner ends with the ends of the lever 13, substantially in line with the center of motion of said lever and with their own outer ends, and a pull-rod, substantially as described.

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